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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,492	09/21/2004	Matthew J. Banet	BAN06	5491

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EXAMINER
MALLARI, PATRICIA C

ART UNIT	PAPER NUMBER
3735	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

E

Office Action Summary	Application No.	Applicant(s)	
	10/711,492	BANET ET AL.	
	Examiner	Art Unit	
	Patricia C. Mallari	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9,11-17,19 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,9,11-17,19 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a final rejection. Any new grounds of rejection were necessitated by the applicants' amendments to the claims.

Claim Objections

Claims 1, 19, and 25 are objected to because of the following informalities:

On line 10 of claim 1, "that:" should be replaced with "that controls the microprocessor to:" since it is not the computer code itself, but the microprocessor that executes the steps.

On line 11 of claim 1, "analyzes" should be replaced with "analyze".

On line 12 of claim 2, "analyzes" should be replaced with "analyze".

On line 15 of claim 1, "calculates" should be replaced with "calculate".

On line 11 of claim 19, "that:" should be replaced with "that controls the microprocessor to:"

On each of lines 12 and 13 of claim 19, each instance of "analyzes" should be replaced with "analyze".

On line 16 of claim of claim 19, "calculates" should be replaced with "calculate".

On line 9 of claim 25, "that:" should be replaced with "that controls the microprocessor to:"

On each of lines 9 and 11 of claim 25, "analyzes" should be replaced with "analyze".

On line 13 of claim 25, "calculates" should be replaced with "calculate".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 14-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14-16 recite "The method according to claim 1". However, claim 1 is drawn to a device and not a method. It is unclear whether claims 14-16 should instead recite "The device according to claim 1" or refer back to either of claims 12 or 13, which are method claims. For the purposes of this examination only, the examiner is assuming that the claim dependency in claims 14-17 is correct and that the applicants intended "device" in place of "method on line 1 of each of the claims. In either case, the applicants should amend the claims to clearly reflect their intention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 6, 7, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,309,916 to Hatschek in view of US Patent No. 5,025,791 to Niwa. Hatschek teaches a device for monitoring a user's blood pressure comprising a blood pressure monitor comprising an optical system comprising a light source 27 and light detector 29 configured to generate a time-dependent waveform related to the user's heartbeat (col. 9, line 49-col. 10, line 34 of Hatschek). A microprocessor 41, 65 receives the time-dependent waveform from the blood pressure monitor and comprises computer code that controls the microprocessor to analyze the time-dependent waveform from the blood pressure monitor with a mathematical model and calculate a blood pressure value form the time-dependent waveform (col. 10, line 58-col. 11, line 46; col. 13, lines 8-34; col. 15, line 60-col. 16, line 61 of Hatschek). Hatschek lacks a motion sensor.

However, Niwa teaches a motion sensor, applicable to a blood pressure monitor (col. 9, line 67-col. 10, line 9 of Niwa), wherein the motion sensor 56 monitors localized motion of the user and is configured to generate a motion information in response (col. 6, line 21-col. 7, line 6 of Niwa). A microprocessor 46 receives the motion information SM and comprises a computer code that controls the microprocessor to analyze the motion information to distinguish between physiological signals generated while the user is moving and while the user is at rest. The microprocessor uses the physiological signals generated when the user is at rest to determine vital signal information (col. 7, lines 11-55; col. 8, line 63-col. 9, line 8 of Niwa). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the invention of Niwa

with that of Hatschek in order to avoid blood pressure readings determined based on inappropriate waves containing variations due to physical motion of the patient (col. 1, lines 40-64; col. 2, lines 19-27; col. 9, line 63-col. 10, line 9 of Niwa).

Regarding claim 2, the motion sensor is an accelerometer (col. 6, line 29 of Niwa).

Regarding claims 6 and 7, the device further comprises a wireless transmitter (col. 11, lines 11-17 of Hastchek). With further regard to claim 7, a component 15 is adapted to or capable of being mounted on a user's finger (col. 9, lines 49-69 of Hatschek).

Regarding claim 25, the microprocessor analyzes the time-dependent waveform from the blood pressure monitor by taking a derivative of the waveform (fig. 9; col. 22, line 56-col. 23, line 54 of Hatschek).

Claims 1, 2, 12-14, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,140,990 to Jones et al in view of US Patent No. 5,025,791 to Niwa. Jones teaches a device for monitoring a user's blood pressure, the device comprising a blood pressure monitor comprising an optical system comprising a light source 8 and a light detector 14 configured to generate a time-dependent waveform related to the user's heart beat (figs. 1 & 2; col. 2, line 62-col. 3, line 38 of Jones). A microprocessor 24 receives the time-dependent waveform from the monitoring, analyzes the time-dependent waveform from the monitor by fitting the waveform with a mathematical model, and calculates a blood pressure value from

parameters determined by fitting the waveform generated (fig. 2; col. 3, line 39-col. 4, line 38; col. 6, line 36-col. 8, line 10 of Jones). Jones lacks a motion sensor.

However, Niwa teaches a motion sensor, applicable to a blood pressure monitor (col. 9, line 67-col. 10, line 9 of Niwa), wherein the motion sensor 56 monitors localized motion of the user and is configured to generate a motion information in response (col. 6, line 21-col. 7, line 6 of Niwa). A microprocessor 46 receives the motion information SM and comprises a computer code that controls the microprocessor to analyze the motion information to distinguish between physiological signals generated while the user is moving and while the user is at rest. The microprocessor uses the physiological signals generated when the user is at rest to determine vital signal information (col. 7, lines 11-55; col. 8, line 63-col. 9, line 8 of Niwa). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the invention of Niwa with that of Jones in order to avoid blood pressure readings determined based on inappropriate waves containing variations due to physical motion of the patient (col. 1, lines 40-64; col. 2, lines 19-27; col. 9, line 63-col. 10, line 9 of Niwa).

Regarding claims 2 and 14, the motion sensor is an accelerometer (col. 6, line 29 of Niwa).

Regarding claims 12 and 13 the method of using the device or system of Jones, in view of Niwa, is inherently disclosed by the description of the device/system given above. With further regard to claim 13, determining if the hand is at rest comprises analyzing a signal sent form a motion to the microprocessor with an algorithm operating on a microprocessor (col. 6, lines 58-col. 7, line 3; col. 7, lines 23-46 of Niwa).

Claims 3, 4, 11, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones, in view of Niwa, as applied to claims 1, 2, 12-14, and 26 above, and further in view of US Patent NO. 5,368,026 to Swedlow et al. Jones, as modified, lacks the motion sensor being a software algorithm that analyzes the time-dependent waveform from the monitor to determine motion. However, Swedlow teaches a physiological monitor wherein the motion sensor may be either an accelerometer or a software algorithm that analyzes the time-dependent waveform from the monitor, which signal may be used to determine blood pressure, to determine motion (col. 7, lines 3- 37 of Swedlow). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the software algorithm of Swedlow as the motion sensor of Jones, in view of Niwa, in place of the accelerometer, since Swedlow teaches the two to be functionally equivalent means of sensing motion.

Regarding claim 4, the software algorithm is computer code operating on a microprocessor (col. 7, lines 8-12 of and lines 39-47 of Swedlow).

Regarding claim 11, an A/D converter (reference numeral 23 in Jones; 1000 in Swedlow) is in communication with the motion sensor, the optical system and the microprocessor, wherein the microprocessor functions as the motion sensor (fig. 1 of Jones; fig. 1 of Swedlow).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatschek in view of Niwa, as applied to claims 1, 2, 6, 7, and 25 above, and further in view of Us

Patent No. 6,705,990 to Gallant. Hatschek, as modified, teaches using a wireless transmitter but is silent as to the details of the transmitter. However, Gallant teaches using a wireless transmitter operating a wireless protocol based on 802.11 to transmit information from a microprocessor (col. 11, lines 65-col. 12, line 14 of Gallant). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the transmitter of Gallant as that of Hatschek, as modified by Niwa, since Hatschek, as modified, discloses using a wireless transmitter and Gallant describes an appropriate such transmitter.

Claims 1, 2, 6, 7, 9, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,616,613 to Goodman et al. in view of US Patent No. 5,025,791 to Niwa. Goodman teaches a device for monitoring a blood pressure, the device comprising a blood pressure monitor and a microprocessor. The monitor comprises an optical system that comprises a light source and a light detector configured to generate a time-dependent waveform related to the user's heartbeat (figs. 1-6; col. 9, line 57-col. 10, line 35 of Goodman). The microprocessor receives the time-dependent waveform from the monitor, analyzes the waveform with a mathematical model, and calculates a blood pressure value from the time-dependent waveform (fig. 1, 2, 5 15B; col. 8, line 52-col. 30, line 7 of Goodman). Goodman lacks motion sensor.

However, Niwa teaches a motion sensor, applicable to a blood pressure monitor (col. 9, line 67-col. 10, line 9 of Niwa), wherein the motion sensor 56 monitors localized motion of the user and is configured to generate a motion information in response (col.

6, line 21-col. 7, line 6 of Niwa). A microprocessor 46 receives the motion information SM and comprises a computer code that controls the microprocessor to analyze the motion information to distinguish between physiological signals generated while the user is moving and while the user is at rest. The microprocessor uses the physiological signals generated when the user is at rest to determine vital signal information (col. 7, lines 11-55; col. 8, line 63-col. 9, line 8 of Niwa). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the invention of Niwa with that of Goodman in order to avoid blood pressure readings determined based on inappropriate waves containing variations due to physical motion of the patient (col. 1, lines 40-64; col. 2, lines 19-27; col. 9, line 63-col. 10, line 9 of Niwa).

Regarding claims 2 and 14, the motion sensor is an accelerometer (col. 6, line 29 of Niwa).

Regarding claim 6, the device further comprises a wireless transmitter (col. 13, lines 42-58 of Goodman).

Regarding claim 7, a component is adapted to be (capable of being mounted on a finger of the user (col. 13, lines 42-58 of Goodman).

Regarding claim 9, the optical system is in communication with a pulse-oximetry circuit (col. 32, lines 22-59 of Goodman).

Regarding claim 12, the method of using the device or system of Jones, in view of Niwa, is inherently disclosed by the description of the device/system given above, wherein Goodman teaches placing the sensor module on the user's hand (col. 13, lines 60-64 of Goodman).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Niwa, as applied to claims 1, 2, 12-14 and 26 above, and further in view of US Patent No. 5,368,026 to Swedlow et al. Jones, as modified, teaches using an accelerometer as the motion sensor. However, Swedlow teaches a physiological monitoring device wherein either an accelerometer or a piezoelectric device may be used as the motion sensor (col. 7, lines 3-7 of Swedlow). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use a piezoelectric device as the motion sensor in place of the accelerometer of Jones, as modified by Niwa, since Swedlow shows the accelerometer and piezoelectric device as being functionally equivalent means of sensing motion.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones, in view of Niwa and Toomim as applied to claims 27 above, and further in view of US Patent No. 6,705,990 to Gallant. Jones, as modified, teaches using a radio frequency transmitter but is silent as to the details of the transmitter. However, Gallant teaches using a radio frequency transmitter operating a wireless protocol based on 802.11 to transmit information from a microprocessor (col. 11, lines 65-col. 12, line 14 of Gallant). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the transmitter of Gallant as that of Jones, as modified by Niwa and Toomim, since Jones, as modified, discloses using a radio frequency transmitter and Gallant describes an appropriate such transmitter.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hatschek in view of Niwa, as applied to claims 1, 2, 6, 7, and 25 above, and further in view of US Patent No. 6,475,153 to Khair et al. Hastchek, as modified, teaches wirelessly transmitting blood pressure information from the microprocessor, but fails to describe means for doing so. However, Khair teaches a system wherein a short-range wireless transmitter is used to transmit blood pressure information from a microprocessor (fig. 12; col. 15, lines 49-51 of Khair). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to use the short range wireless transmitter of Khair as the transmitter of Hatschek, as modified by Niwa, since Hatschek, as modified, teaches using a wireless transmitter and Khair describes an appropriate such transmitter.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jones in view of Niwa, as applied to claims 1, 2, 12-14, and 26 above, and further in view of US Patent No. 5,995,857 to Toomim. Jones, as modified, lacks wirelessly transmitting the blood pressure value using a radio frequency transmitter. However, Toomim teaches that connection of electrical components may be effected either by wires or a radio-frequency transmitter and receiver (col. 4, lines 28-34 of Toomim). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to connect the computer of Jones, as modified by Niwa, to the display using a radio frequency

transmitter, since Toomim teaches wired and radio-frequency communication to be functionally equivalent means of electrical connection.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia C. Mallari whose telephone number is (571)

272-4729. The examiner can normally be reached on Monday-Friday 10:00 am-6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor, II can be reached on (571) 272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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